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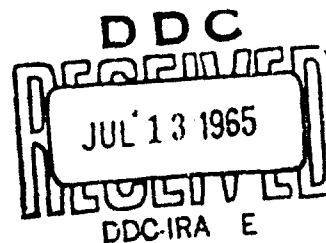
ORNITHOSIS OUTBREAK AT A FOWL PLANT IN KREMENETS

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ORNITHOSIS OUTBREAK AT A FOWL PLANT IN KREMENETS

[Following is the translation of an article by V. T. Shugaylo and P. G. Zuyenko, Ternopl Medical Institute and Oblast Sanitary-Epidemiological Station, published in the Russian-language periodical Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (Journal of Microbiology, Epidemiology and Immunobiology) No 8, 1963, pages 141-142. It was received on 31 Mar 1962. Translation performed by Sp/6 Charles T. Ostertag Jr.]

The ornithosis outbreak being described was recorded in Kremenets, where from 24 June through 5 July, 15 out of the 59 workers at a fowl plant became ill. Based on professions, the stricken persons were broken down in the following manner: Pluckers -- 12, suppliers -- 2, and one inspector. The stricken persons were women between the ages of 30 to 45 years. This group was predominant among workers of this enterprise.

The processing of the fowls is partially mechanized. After slaughter, the fowls are plucked on feather plucking machines and then this job is finished manually. Gutting is also accomplished by hand. During an investigation of the fowl plant, it was established that the places for housing the birds (cages, sheds, platforms) were cleaned of droppings irregularly and routine disinfection wasn't performed systematically.

Prior to the onset and during the outbreak, the birds (ducks and geese) arrived at the fowl plant from five rayons. In setting up the allergic test and investigating the blood serum in the complement fixation reaction in seven workers from the poultry farms where the birds came from, positive results were obtained. Out of 15 persons investigated the allergic test turned out to be positive in 3 and weakly positive in 7 persons. A complement fixation reaction in a titer of 1:32 to 1:64 was observed in 6 persons, from 1:8 to 1:16 in 4 persons, and in 5 persons it was negative.

Of the 15 persons stricken the disease proceeded in a light form in 10 of them (the febrile period lasted from 2-4 days, there were complaints of headaches, pains in the extremities and a cough). We investigated five of the stricken persons in the hospital.

1. Patient M, 34 years old, was engaged in plucking the carcasses of the birds (skubalshchitsa) [Apparently the title for this job in Ukrainian, the Ukrainian verb skubati means to pluck]. She arrived in the hospital on the seventh day of illness with a diagnosis of sinistral focal pneumonia. The disease started suddenly with a headache, increased temperature, expressed intoxication (lack of appetite, nausea, vomiting) tendency to perspire and a cough. The patient complained of general weakness and a pain behind the sternum which was more intense when coughing. Objectively, on the part of the respiratory organs, rales were noted in the upper lobe. They were particularly clear in the subclavicular area. During percussion there was a clear pulmonary tone, of an insignificant intensity, obtusion in the upper chamber of the left lung, and a strengthening of vocal vibrations in this area; the heart tones were muffled, rhythmic, pulse 92 beats a minute, satisfactory inflation, arterial pressure 110/80 mm; stomach soft, painless, liver and spleen weren't palpated. In x-raying the chest sinistral focal pneumonia was determined. The temperature remained at a high level for 11 days.

Blood analysis: Erythrocytes 3,800,000; leucocytes 7900; eosinophiles 1%; monocytes 3%; ESR 53 mm/hr. The allergic test for ornithosis was sharply positive (+++) and the complement fixation reaction was positive in a titer of 1:32.

2. Patient Sh., 33 years of age, a skubalshchitsa, arrived in the infectious disease ward with a diagnosis of pneumonia on the seventh day of the disease. The disease began suddenly with the symptoms of chills, general weakness, cough, tinnitus, temperature increased up to 40°, pain in the extremities, particularly in the sural muscles.

The following were noted during examination: Dry tongue coated with a white film, soft stomach, painless, the liver was palpated along the medioclavicular line 3 cm below the edge of the arcus costarum, it was slightly morbid during palpation; during auscultation moist rales were heard in the lungs from the left. With x-ray examination a diagnosis of bilateral pneumonia was established. Heart tones were muffled and the pulse was 120 beats a minute, weak inflation. The high temperature was maintained for 14 days.

Blood analysis: Erythrocytes 4,200,000; leucocytes 6600; eosinophiles 0; monocytes 1%; ESR 60 mm/hr. In the urine 0.033 g/100 albumin was detected. The allergic test for ornithosis was sharply positive (+++), the complement fixation reaction was positive in a titer of 1:32.

The patients were treated with penicillin, sulfanilamide preparations

(sulfodimezine, norsulfasol), calcium chloride and vitamins in ordinary doses.

As is apparent from the patients' histories and also from other observations by us, in the overwhelming majority of patients a sudden onset of the disease was noted and in only one patient did it begin gradually. In all the patients there was noticeable dysphoria, rapid fatigability, chills, pains in the extremities, breakdown in the entire body, headache, temperature increase up to 40° which was maintained for a long time (from 4 to 14 days), and its lowering passed through a type of abbreviated lysis.

The symptoms of intoxication were manifested in a general weakness, dryness of the tongue, nausea and vomiting. In all cases a cough was observed, initially with dry mucous and then with mucous which was difficult to eliminate right up until recovery, with pains behind the sternum. Pneumonia was detected by roentgenology in 3 out of the 5 persons being treated at the hospital. As regards the heart, a muffling of tones was observed. The number of erythrocytes and leucocytes remained within normal limits or in individual cases it was insignificantly increased. In all the patients the ESR was speeded up within the limits of 35 to 63 mm/hr. The majority had constipation. The presence of albumin and lixiviated erythrocytes was noted in the urine.

There was no conformity between the allergic test and the complement fixation reaction. This is apparently explained by the difference in the period for accumulating and preservation of antibodies in the blood sera and the emergence of the allergic state of the organism.

The following measures were taken in order to liquidate the outbreak. A conclusive and current disinfection was performed. The receipt of birds was stopped and those who had been in contact were subjected to medical investigation. Discussions were held on measures for the prevention of the disease.

Since this time no new cases have been recorded.

CONCLUSIONS

1. When there is suspicion of ornithosis, it is necessary to consider epidemiological (contact with infected birds) and clinical data, and to make extensive use of laboratory methods of diagnosis.
2. The data presented from the laboratory investigation testifies that ornithosis is encountered considerably more often than it is diagnosed.